

National Pollutant Inventory emissions released by Gladstone Industry Leadership Group members

The Gladstone Industry Leadership Group (GILG) has developed this table based upon National Pollutant Inventory (NPI) data released by the Australian Government in April 2010 and which is available at www.npi.gov.au.

The table summarizes the combined emissions of GILG's members and through its disclosure demonstrates the members' commitment to transparency.

Based upon this and other information, by mid-2010 the Clean and Healthy Air for Gladstone project will calculate the concentration and frequency at which Gladstone residents are exposed to these contaminants and assess any potential health impacts of these exposures.

Should you have any questions or would like further information, please contact Kurt Heidecker at 0438 184 476 or kurt.heidecker@gilg.com.au

Total of Gladstone Industry Leadership Group (GILG) National Pollutant Inventory (NPI) emissions - 2008 / 09 ⁽¹⁾

Substance ⁽³⁾	Total NPI Air Emissions (kg per year)							GILG %
	Boyne Smelter Limited (BSL)	Cement Australia	NRG	Queensland Alumina Limited (QAL)	Rio Tinto Alcan - Yarwun	GILG Total (kg per year)	Gladstone Region ⁽⁴⁾ (kg per year)	
Acetaldehyde ⁽²⁾	51,010			10,900		61,910	61,910	100%
Ammonia (total) ⁽²⁾			1,400	12,500		13,900	30,384	46%
Antimony & compounds		7.93				7.93	8.93	89%
Arsenic & compounds ⁽²⁾	74.00	4.59	9.70	33.54	0.88	123	125	98%
Benzene ⁽²⁾	29,161					29,161	30,693	95%
Beryllium & compounds ⁽²⁾	3.00	0.27	0.91	0.38	0.23	4.78	4.80	100%
Boron & compounds		0.25	190,004	2,772		192,777	192,822	100%
Cadmium & compounds ⁽²⁾	103.00	0.59	7.15	3.55	0.13	114.43	117.73	97%
Carbon monoxide	35,533,681	755,187	971,300	1,020,800	72,664	38,353,632	38,550,718	99%
Chlorine & compounds			0.0500			0.0500	8.1500	1%
Chromium (III) compounds	619	19	58	93	50	839	1,034	81%
Chromium (VI) compounds ⁽²⁾			6.10	0.90	1.06	8.06	17.25	47%
Cobalt & compounds		3.55	21.90	3.51	9.45	38.41	40.41	95%
Copper & compounds	654	593	22	39	15	1,323	1,379	96%
Cumene (1-methylethylbenzene)			11			11	438	2%
Fluoride compounds	471,767	166	250,729	43,513	4,515	770,689	771,175	100%
Formaldehyde (methyl aldehyde)	10,718					10,718	10,718	100%
Hydrochloric acid	768	12,754	800,000	48,000	221	861,743	861,745	100%
Lead & compounds ⁽²⁾	439	38	35	19	36	567	672	84%
Manganese & compounds ⁽²⁾		8	550	362	76	996	3,412	29%
Mercury & compounds	7	6	93	149	5	259	260	100%
Nickel & compounds ⁽²⁾	1,043	66	117	113	32	1,371	1,499	91%
Oxides of Nitrogen ⁽²⁾	534,675	2,918,047	43,000,230	8,447,760	990,635	55,891,347	56,611,024	99%
Particulate Matter 10.0 um ⁽²⁾	850,101	33,458	137,000	352,700	116,576	1,489,835	1,707,640	87%
Particulate Matter 2.5 um ⁽²⁾	473,162	10,781	27,002	46,872	41,945	599,762	620,280	97%
Polychlorinated dioxins and furans (TEQ) ⁽²⁾	0.0002	0.0000	0.0006	0.0000	0.0001	0.0009	0.0009	100%
Polycyclic aromatic hydrocarbons (B[a]P) ⁽²⁾	345.00	0.29	0.26	4.26	0.63	350.44	356.11	98%
Selenium & compounds		18				18	22	82%
Sulfur dioxide ⁽²⁾	12,430,785	49,064	35,000,003	4,020,052	1,310,457	52,810,361	52,818,167	100%
Sulfuric acid			360,000			360,000	360,000	100%
Toluene (methylbenzene)	27,078					27,078	30,336	89%
Total Volatile Organic Compounds ⁽²⁾	249,479	4,535	120,092	27,630	248,922	650,658	951,546	68%
Trichloroethylene ⁽²⁾	23,401					23,401	23,401	100%
Xylenes (individual or mixed isomers) ⁽²⁾	2,629		75			2,704	3,988	68%
Zinc and compounds ⁽²⁾	4,063	254	133	331		4,781	5,034	95%

NOTE 1: About the National Pollutant Inventory (NPI)

(as outlined on the NPI website, www.npi.gov.au)

Many activities undertaken by people in their daily lives, such as at work, home, school and play, can adversely affect the environment, and they may contribute emissions to our air, land and water.

The National Pollutant Inventory (NPI) is tracking pollution across Australia, and ensuring that the community has access to information about the emission and transfer of toxic substances which may affect them locally.

There has been increasing community demand to know about toxic substances emitted to the local environment. Australian, state and territory governments have agreed to legislation called National Environment Protection Measures (NEPMs), which help protect or manage particular aspects of the environment. Australian industries are required to monitor, measure and report their emissions under this legislation.

The desired environmental outcomes of the NPI program are to:

- maintain and improve air and water quality;
- minimise environmental impacts associated with hazardous waste; and
- improve the sustainable use of resources.

The NPI contains data on 93 substances that have been identified as important due to their possible effect on human health and the environment. The data comes from facilities like mines, power stations and factories, and from other sources such as households and transport.

Facility operators determine their own emissions and transfers, and diffuse emissions from households and other sources like motor vehicles are estimated by government agencies.

Tracking pollution through the NPI is essential to enhance environmental quality; increase public and industry understanding of the types and quantities of toxic substances emitted into the environment and transferred off-site as waste; encourage industry to use cleaner production techniques to reduce emissions and waste generation; track environmental progress; meet community right-to-know obligations; and assist government in identifying priorities for environmental decision-making.

Disclaimer

(as outlined on the NPI website, www.npi.gov.au)

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Pollutant exposure factors

The pollution exposure to humans and the environment cannot be determined solely from the NPI. Many additional factors determine whether a pollutant emission is felt as ground level pollution. Examples of additional factors are the:

- height of an emission above the ground (high stacks versus ground level vehicle exhausts);
- nature of receiving environment;
- chemical reactivity of the substance;
- prevailing weather conditions.

Since NPI does not attempt to collect information about these additional factors, NPI data can only reflect pollutant emissions at the emission source.

Please note that a blank cell on the above table does not indicate zero emissions, only that emissions for this facility were below the required NPI reporting threshold.

Please note that further information about the approach, definitions and thresholds used in the NPI process and nature of NPI pollutants is available at <http://www.npi.gov.au>.

NOTE 2: Pollutants of Potential Interest

These compounds have been identified by Queensland Health on page 31 of the Clean and Healthy Air for Gladstone Project Health Assessment Phase 1 Summary Report as Pollutants of Potential Interest.

Further information is available at <http://www.derm.qld.gov.au/register/p02733aa.pdf>

NOTE 3: Substance

The potential health impacts of these contaminants are explained in Queensland Health report titled "Clean and Healthy Air for Gladstone: Key pollutant inventory and Suite of health outcomes to be assessed".

This document is available in the GILG document library or at <http://www.derm.qld.gov.au/register/p02334aa.pdf>

NOTE 4: Gladstone Region (kg per year)

This column shows, for each contaminant, the total annual air emissions in the 4680 and 4694 Post Code areas, as defined by www.npi.gov.au.